

1 33. (Amended) The semiconductor device of claim 31, wherein both
2 the second material and the trench filler material include silicon dioxide.

REMARKS

Claims 26-34 were rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,433,794 to Fazan et al.

Claim 26 includes the limitation "a trench filler material deposited in the trench, the trench filler material having an etch rate that is substantially similar to or less than the first etch rate." Claim 31, as amended, includes the limitation "wherein the etch rate of the second material is substantially similar to or less than the etch rate of the first material." These limitations are not disclosed or suggested by the Fazan et al. reference as is correctly pointed out by the Examiner.

The Examiner stated:

Fazan et al. does not explicitly teach a trench filler material that has an etch rate that is similar to or less than that of the first material. Since Fazan et al. teaches that the pad oxide is deposited, one of ordinary skill in the art would have been left to choose a conventional method of depositing the pad oxide, such as CVD or TEOS. It is apparent that a CVD or TEOS first material would have had the same etch rate as that of a CVD or TEOS second material. It would have been obvious to one of ordinary skill in the art to select CVD oxide or TEOS for the first material as a matter of design choice.

Applicants respectfully disagree with the Examiner and point out that this apparently was not obvious to Fazan et al. as they did not use materials having the same etch rate. In fact, the Fazan et al. reference teaches away from Applicants' device. Applicants respectfully direct the Examiner's attention to Figures 5 and 6 of the Fazan reference. It is clearly shown in those figures that

the etch rate of layer 3 is different from that of the trench filler 4 as the trench filler 4 remains after the etch process while layer 3 has been etched completely away.

For the above reasons, Applicants believe that the application, as now amended, is patentable over the Fazan et al. reference. Applicants respectfully request the Examiner to withdraw the rejection of Applicants' claims 26-34 and pass the case to issue.

The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504 (MICT-0005-D1-US).

Date: _____

7/31/01

Respectfully submitted,



Howard R. Boyle
Registration No. 29,617
TROP, PRUNER & HU, P.C.
8554 Katy Freeway, Suite 100
Houston, Texas 77024
(713) 468-8880 [Phone]
(713) 468-8883 [Fax]

APPENDIX

1 31. (Amended) A semiconductor structure having a trench, comprising:
2 a trench filler material that fills the trench; [and]
3 at least a portion of a second material deposited on the trench filler
4 material and the structure[,];
5 wherein the second material is annealed; and
6 wherein the etch rate of the second material is substantially similar
7 to or less than the etch rate of the first material.

1 33. (Amended) The semiconductor device of claim [32] 31, wherein
2 both the second material and the trench filler material include silicon dioxide.